

DATE: 1 June 2023
DESIGNER: Alex Naper
PROJECT No: SES 06323 Rev B
PROJECT NAME: Churchfields - Waterman Moylan



Residential area designed in accordance with EN13201-2:2015 Category P4.

Spine access road designed in accordance with EN13201-2:2015 Category P3.

MF derived from: 0.92 x 0.90 or 0.96 x 0.99 (LMF (Low pollution environment & 72 month cleaning cycle) x LLMF x LSF)
LLMF & LSF values @ 100,000 hours & 25 degrees C.

Rev A: Updated as per comments.
Rev B: Updated as per comments.

Outdoor Lighting Report

PREPARED BY: Sabre Electrical Services Ltd.
Unit 11,
Bellview Industrial Estate,
Tolka Valley Road,
Dublin 11
Phone Number: 01 8110875
Contact: Graham Sheehan
eMail: graham@sabrelighting.ie

Layout Report

General Data

Dimensions in Metres Angles in Degrees

Calculation Grids

ID	Grid Name	X	Y	X' Length	Y' Length	X' Spacing	Y' Spacing
1	Grid 1	706909.33	741458.87	232.00	205.00	1.50	1.50
2	Grid 2	706854.49	741309.37	202.00	160.00	1.50	1.50
3	Grid 3	706899.45	741416.90	202.00	72.00	1.50	1.50
4	Grid 4	707150.45	741522.08	78.00	78.00	1.50	1.50

Luminaires

Luminaire A Data



Supplier	C U Phosco
Type	E950-28-P6A-730-SD0525-23W
Lamp(s)	730SA
Lamp Flux (klm)	3.03
File Name	E950-28-P6A-730-SD0525-23W.ies
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	803.0, 171.3, 0.0
No. in Project	8

Luminaire B Data



Supplier	C U Phosco
Type	E950-28-P6A-730-C0600-16W
Lamp(s)	730N
Lamp Flux (klm)	2.35
File Name	E950-28-P6A-730-C0600-16W.ies
Maintenance Factor	0.82
Imax70,80,90(cd/klm)	961.6, 241.7, 0.0
No. in Project	60

Luminaire C Data



Supplier	C U Phosco
Type	E950-28-P4A-730-C200-7W
Lamp(s)	730N
Lamp Flux (klm)	0.77
File Name	E950-28-P4A-730-C0200-7W.ies
Maintenance Factor	0.82
Imax70,80,90(cd/klm)	659.3, 183.1, 0.3
No. in Project	13

Luminaire D Data



Supplier	C U Phosco
Type	E950-28-F2A-730-C600-16W
Lamp(s)	730N
Lamp Flux (klm)	2.28
File Name	E950-28-F2A-730-C0600-16W.ies
Maintenance Factor	0.82
Imax70,80,90(cd/klm)	623.6, 113.9, 0.3
No. in Project	2

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	A	706923.14	741421.56	6.00	94.00	0.00	0.00	0.40			
2	A	706956.30	741424.84	6.00	95.00	0.00	0.00	0.40			
3	A	706966.68	741423.15	6.00	343.00	0.00	0.00	1.40			
4	B	706970.33	741451.00	6.00	6.00	0.00	0.00	0.40			
5	A	706997.95	741433.26	6.00	256.00	0.00	0.00	0.40			
6	A	707015.78	741417.73	6.00	72.00	0.00	0.00	0.40			
7	A	707033.18	741429.95	6.00	291.00	0.00	0.00	0.40			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
8	A	707047.86	741413.57	6.00	161.00	0.00	0.00	0.40			
9	B	706916.40	741396.70	6.00	159.00	0.00	0.00	0.40			
10	A	706910.06	741413.43	6.00	340.00	0.00	0.00	0.40			
11	B	707028.03	741406.12	6.00	339.00	0.00	0.00	0.40			
12	B	707039.70	741382.26	6.00	168.00	0.00	0.00	0.40			
14	B	706991.76	741473.98	6.00	275.00	0.00	0.00	0.40			
15	B	707014.44	741476.14	6.00	275.00	0.00	0.00	0.40			
16	B	707025.04	741478.04	6.00	2.00	0.00	0.00	0.40			
17	B	707044.89	741452.63	6.00	180.00	0.00	0.00	0.40			
18	B	707041.38	741489.15	6.00	186.00	0.00	0.00	0.40			
19	B	707022.46	741505.69	6.00	7.00	0.00	0.00	0.40			
20	B	707038.40	741521.43	6.00	186.00	0.00	0.00	0.40			
21	B	707019.81	741534.67	6.00	3.00	0.00	0.00	0.40			
22	B	707048.72	741531.03	6.00	95.00	0.00	0.00	0.40			
23	B	707047.86	741549.62	6.00	274.00	0.00	0.00	0.40			
24	B	707075.85	741550.87	6.00	274.00	0.00	0.00	0.40			
25	B	707074.46	741533.48	6.00	99.00	0.00	0.00	0.40			
26	B	707098.14	741544.39	6.00	186.00	0.00	0.00	0.40			
27	B	707082.79	741521.43	6.00	0.00	0.00	0.00	0.40			
28	B	707101.28	741511.56	6.00	184.00	0.00	0.00	0.40			
29	B	707085.84	741488.95	6.00	355.00	0.00	0.00	0.40			
30	B	707104.27	741479.90	6.00	197.00	0.00	0.00	0.40			
31	B	707089.47	741450.45	6.00	14.00	0.00	0.00	0.40			
32	C	707109.26	741451.18	5.00	246.00	0.00	0.00	0.40			
33	B	707094.36	741425.42	6.00	109.00	0.00	0.00	0.40			
34	B	707071.83	741435.52	6.00	276.00	0.00	0.00	0.40			
35	B	707066.00	741417.45	6.00	95.00	0.00	0.00	0.40			
36	B	707078.84	741563.38	6.00	7.00	0.00	0.00	0.40			
37	B	707092.79	741577.83	6.00	278.00	0.00	0.00	0.40			
38	B	707119.76	741580.49	6.00	283.00	0.00	0.00	0.40			
39	B	707109.42	741559.69	6.00	91.00	0.00	0.00	0.40			
40	C	707079.00	741587.33	5.00	180.00	0.00	0.00	0.40			
41	C	707060.80	741584.55	5.00	96.00	0.00	0.00	0.40			
42	C	707034.62	741582.18	5.00	96.00	0.00	0.00	0.40			
43	B	707032.45	741559.65	6.00	194.00	0.00	0.00	0.40			
44	B	707017.10	741562.99	6.00	0.00	0.00	0.00	0.40			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
45	B	707008.60	741584.77	6.00	276.00	0.00	0.00	0.40			
46	B	706990.91	741571.30	6.00	95.00	0.00	0.00	0.40			
47	B	706972.97	741581.94	6.00	276.00	0.00	0.00	0.40			
48	B	706973.03	741561.29	6.00	192.00	0.00	0.00	0.40			
49	B	706975.58	741532.97	6.00	192.00	0.00	0.00	0.40			
50	B	706979.58	741492.48	6.00	183.00	0.00	0.00	0.40			
51	B	706966.30	741492.54	6.00	0.00	0.00	0.00	0.40			
52	C	707110.42	741512.65	5.00	274.00	0.00	0.00	0.40			
53	C	707132.68	741514.60	5.00	274.00	0.00	0.00	0.40			
54	C	707134.47	741526.23	5.00	358.00	0.00	0.00	0.40			
55	C	707130.44	741535.98	5.00	94.00	0.00	0.00	0.40			
56	C	707129.05	741554.28	5.00	3.00	0.00	0.00	0.40			
57	B	706963.91	741519.79	5.00	7.00	0.00	0.00	0.40			
58	B	707019.70	741374.01	6.00	342.00	0.00	0.00	0.40			
59	B	707030.84	741348.55	6.00	168.00	0.00	0.00	0.40			
60	B	707010.28	741338.08	6.00	345.00	0.00	0.00	0.40			
61	C	707024.40	741323.14	5.00	168.00	0.00	0.00	0.40			
62	C	707018.07	741316.99	5.00	76.00	0.00	0.00	0.40			
63	B	706985.68	741325.37	6.00	73.00	0.00	0.00	0.40			
64	B	706988.10	741342.70	6.00	252.00	0.00	0.00	0.40			
65	B	706972.82	741311.60	6.00	164.00	0.00	0.00	0.40			
66	B	706955.88	741326.56	6.00	154.00	0.00	0.00	0.40			
67	B	706959.91	741388.81	6.00	344.00	0.00	0.00	0.40			
68	B	706956.27	741326.32	6.00	330.00	0.00	0.00	0.40			
69	B	706981.90	741403.81	6.00	169.00	0.00	0.00	0.40			
70	B	706950.66	741353.39	6.00	344.00	0.00	0.00	0.40			
71	B	706971.80	741366.35	6.00	169.00	0.00	0.00	0.40			
72	B	706941.16	741318.15	6.00	256.00	0.00	0.00	0.40			
73	B	706924.57	741309.71	6.00	67.00	0.00	0.00	0.40			
74	B	706899.05	741329.21	6.00	254.00	0.00	0.00	0.40			
75	B	706905.55	741354.66	6.00	155.00	0.00	0.00	0.40			
76	B	706876.13	741335.64	6.00	72.00	0.00	0.00	0.40			
77	B	706890.27	741319.05	6.00	69.00	0.00	0.00	0.40			
78	B	706890.24	741347.57	6.00	337.00	0.00	0.00	0.40			
79	B	706899.72	741380.08	6.00	344.00	0.00	0.00	0.40			
80	B	706948.53	741297.16	6.00	78.00	0.00	0.00	0.40			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
81	D	707142.32	741562.66	4.00	90.00	0.00	0.00	0.40			
82	D	707155.21	741578.45	4.00	194.00	0.00	0.00	0.40			
83	C	707184.35	741557.32	5.00	252.00	0.00	0.00	0.40			
84	C	707166.21	741566.75	4.00	263.00	0.00	0.00	0.40			

Horizontal Illuminance (lux)

Grid 1



Results

Eav	5.54
Emin	1.10
Emax	20.83
Emin/Emax	0.05
Emin/Eav	0.20

Horizontal Illuminance (lux)

Grid 2

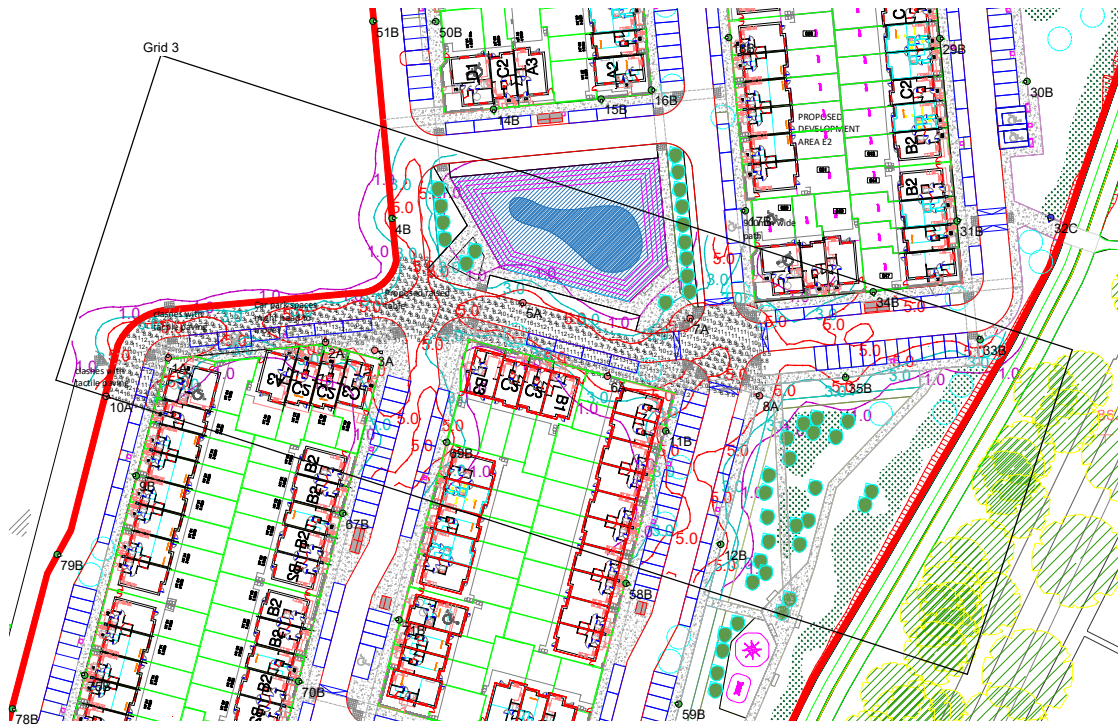


Results

Eav	5.52
Emin	1.09
E _{max}	20.21
E _{min} /E _{max}	0.05
E _{min} /E _{av}	0.20

Horizontal Illuminance (lux)

Grid 3

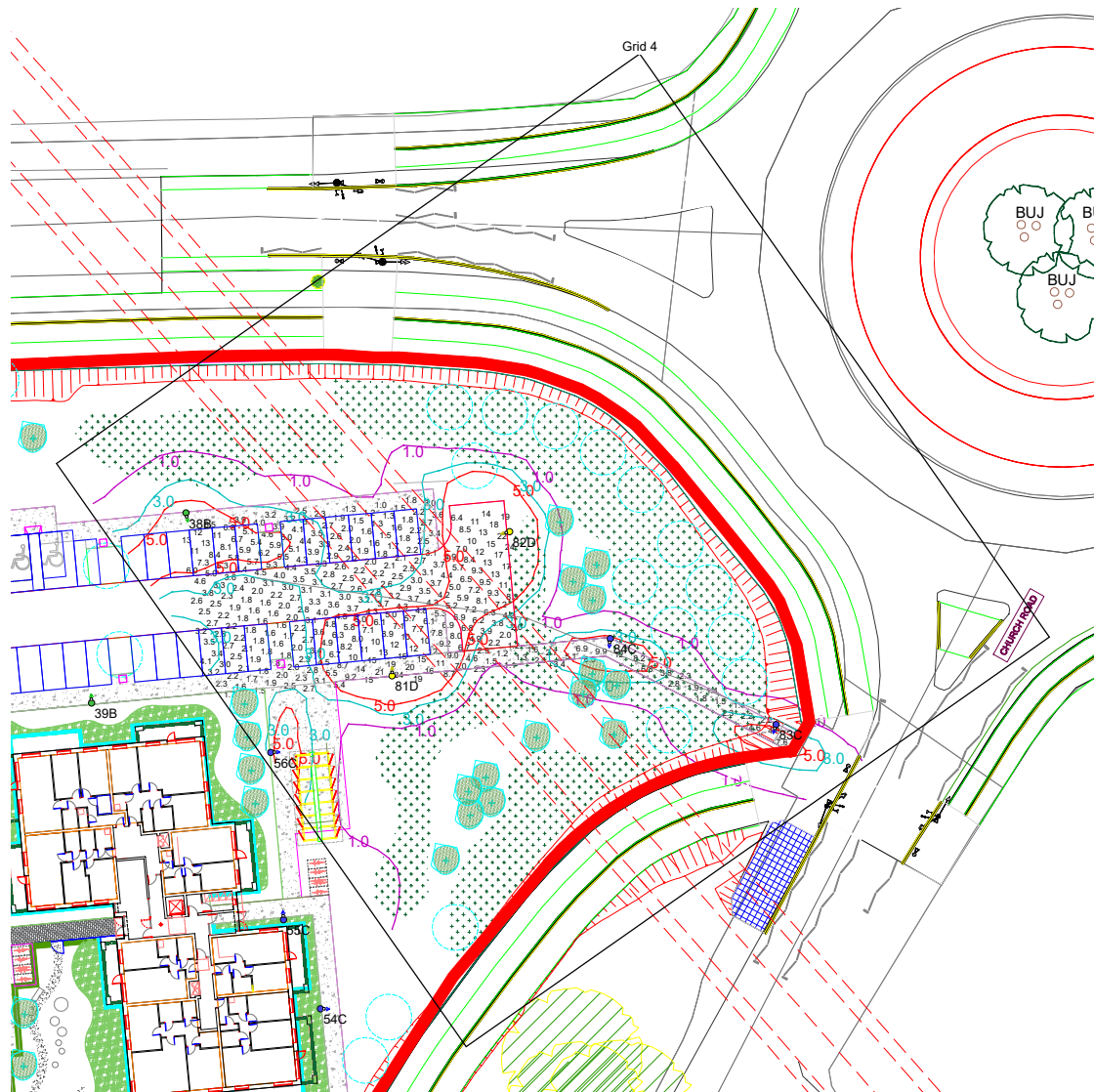


Results

Eav	7.66
Emin	1.66
E _{max}	20.35
E _{min} /E _{max}	0.08
E _{min} /E _{av}	0.22

Horizontal Illuminance (lux)

Grid 4



Results

Eav	5.22
Emin	1.05
E _{max}	24.13
E _{min} /E _{max}	0.04
E _{min} /E _{av}	0.20